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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,250	03/22/2004	Satoru Yoneda	204552032500	8947

7590 06/13/2005

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EXAMINER

REIS, TRAVIS M

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/805,250

Applicant(s)

YONEDA ET AL.

Examiner

Travis M. Reis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040322.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: r2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5-8, & 10-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Yura et al. (U.S. Patent 6795678).

Yura et al. discloses a belt-type fixing device (14) in Figure 4 comprising a continuous, metal or resin, nip forming member (19) that is fixed inside an endless-sheet-like fixing belt (15) to be heated by a rotatable heating roller (16) in a position away from the nip forming member, so as to be incapable of rotating, and a rotatable pressurizing member with an

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elastic layer (17) and a thickness of 5 mm & a hardness of 20-40 on the Asker C scale, with the fixing belt interposed between, wherein a contact part between the fixing belt and the pressurizing roller forms a fixing nip (L1) and a surface of the nip forming member that is opposite to the pressuring member is configured as a curved surface (L10) extending along an outer circumferential surface of the pressurizing roller so that a pressure distribution in the fixing nip is made generally flat with respect to a paper feeding direction (S); and when the pressurizing roller rotates, the belt member follows; and further wherein the radius, and mean radius, of the curvature of the curved surface of the nip and the radius of the pressurizing layer meets the equation $r_2 \leq r_1 \leq r_2 \cdot K$.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3, 4, & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yura et al.

With reference to claims 3 & 4, Yura et al. discloses all of the instant claimed invention as stated above in the rejection of claims 1, 2, 5-8, & 10-15 but does not disclose that the nip forming member causes a radial strain of not less than 0.3 mm in the elastic layer of the pressurizing roller with a mean pressure not less than 80 kPa; or that the thermal conductivity of the elastic layer is 0.3 W/(m·K) or less. However, to choose a radial strain of not less than 0.3 mm or thermal conductivity of 0.3 W/(m·K) or less in the elastic layer & a mean pressure not less than 80 kPa, absent any criticality, is only considered to be the " optimum " values of the elastic layer properties, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to make the elastic layer disclosed by Yura et al. have a thermal conductivity of 0.3 W/(m·K) or a radial strain of 0.3 mm with a mean pressure 80 kPa in order to be durable.

With reference to claim 9, Yura et al. discloses all of the instant claimed invention as stated above in the rejection of claims 1, 2, 5-8, & 10-15 but does not disclose a mean pressure in the fixing nip between 50 kPa to 250 kPa. However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a fixing nip having a mean pressure in the range of 50 kPa to 250 kPa, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the "optimum range" involves only routine skill in the art. In re Aller, 105 USPQ 233. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was

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made to provide the fixing nip disclosed by Yura et al. to have a mean pressure in the range of 50 kPa to 250 kPa in order that the paper remain in place while the toner is fixed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Imperial discloses sleeved organic rubber pressure rolls (U.S. Patent 4149797). Kanesawa et al. disclosed an image fixing device (U.S. Patent 5666624). Okabayashi discloses a fixing device and fixing method (U.S. Patent 5866875). Okayasu et al. discloses a heat fixing member having a core metal and release layer (U.S. Patent 6490429). Natsuhara et al. discloses a thermal fixing apparatus (U.S. Patent 6671489). Nakatogawa et al. discloses a sliding member for electrophotographic apparatus (U.S. Patent App. Pub. 2004/0131401). Uehara et al. discloses a fixing device (U.S. Patent App. Pub. 2005/0047838).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis M. Reis whose telephone number is (571) 272-2249. The examiner can normally be reached on 8--5 M--F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Travis M Reis
Examiner
Art Unit 2859



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800

tmr
June 8, 2005

CHRISTOPHER W. FULTON
PRIMARY EXAMINER